



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

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San Francisco, CA 94105-3901

SFUND RECORDS CTR
88173501

March 30, 1995

Michael Kierig
NEC Electronics, Inc.
475 Ellis Street MV-4511
Mountain View, CA 94039-7241

Subject: EPA's Review of the Soil Remediation Report for 501
Ellis Street, submitted March 1992

Dear Mr. Kierig:

In accordance with the provisions of Section XIV of the CERCLA §106 Order, the above referenced Soil Remediation Report (SRR) for 501 Ellis Street is conditionally approved contingent on addressing the following comments to EPA's satisfaction.

Text revisions to address EPA's comments shall be incorporated and a final version of the document, superseding all others, must be issued. EPA recommends that all revisions to text and figures be submitted in draft form to EPA for review and approval, before release of the final revised document. Detailed responses to all EPA comments shall be incorporated in an appendix. The response to comments section should include a cross index to indicate where in the text the response to comment can be located. This will facilitate the public's review of the document.

The Revised Soil Remediation Report will be due to EPA by May 31, 1995. Failure to cure these deficiencies in the time specified above constitutes a violation of the Order as of the date that the original submittal was due.

GENERAL COMMENTS:

1. In Area 2 and some portions of Area 1, the excavations did not extend to the exploratory borings that were utilized as "clean" boundaries. Since the approved sidewall sampling, proposed in the Proposed Remedial Design and Construction Operation and Maintenance Plan for 501 Ellis document was abandoned, these exploratory borings are the only data points that can confirm contaminant concentrations below the clean up standard. In areas where the excavation did not extend to the exploratory boring locations there is the potential for contaminants to still remain. The measurement of volatilized chemical concentrations from the top of auger-holes with an HNU is not an acceptable method to document the extent of soil contamination in an excavation. Even the use of field analytical equipment should be accompanied by soil samples sent to an off-site laboratory to

verify on-site results. The areas where soil excavation did not extend to the exploratory borings will need to be targeted for soil sampling in the Confirmatory Sampling work plan.

2. The SRR indicates that the break in the buried waste line was discovered where the line entered the building. The location of the line suggests that contamination may be present adjacent to the building and beneath it. No sampling was conducted directly adjacent to the building wall. The underground solvent tank and neutralization tank, removed in 1984, was also located adjacent to the building. Table 12 indicates that trichloroethene (TCE) was detected in exploratory borings R-9 and R-35 at depths from 8.5 to 15.5 feet below ground surface (bgs). Detections at these depths in the vicinity of the former tanks indicates that contamination may have originated from these sources and have migrated. No additional borings were installed between R-9, R-35 and the building wall. The excavation extended to these borings, but since no excavation wall samples were analyzed for verification, there is the potential for contaminants above the clean up level to exist between these borings and the building. Additionally, contaminants within the vicinity of the former tanks may have migrated to boring R-6 without being detected at R-1 or R-7. Additional sampling is recommended in these areas to determine if contaminants above clean up levels remain.

3. The data from R-6 showing TCE levels above the clean up criteria can not be dismissed with statistical analysis. The SRR must address this data and evaluate alternatives for determining the extent of the contamination at that location.

4. The document states that ten percent of the samples were analyzed for additional parameters such as EPA Method 8020 and 8040 for documentation purposes. Please include a description of how soil samples were chosen for these analytical parameters, what is meant by "documentation purposes", and a discussion and interpretation of the analytical results.

5. The Order (section IX.c.2(f)) states that each respondent shall submit a Confirmatory Sampling Report to EPA for approval at the conclusion of the soil remediation activities. Section IX.c.2.(2) states that an Operation and Maintenance Plan is due within 180 days of the initiation of construction. The excavation and treatment of soils at 501 Ellis constitutes the initiation of construction. Requirements of the O&M plan include provisions for "ensuring the effectiveness of the remedy through continued monitoring". The revised SRR should include a schedule for the submittal of an O&M plan and a Confirmatory Soil Sampling work plan. Confirmatory soil sampling must address all areas in which any of the chemicals of concern have been detected above their respective clean up standards.

SPECIFIC COMMENTS:

1. pg. 1-4 The text states that the Proposed Final Remedial Design and Construction Operation and Maintenance Plan (RDD), submitted September 1991, was approved by EPA on October 31, 1991. In reviewing the EPA correspondence it seems that the RDD was partially approved allowing the removal actions and further characterization to proceed. The correspondence states, "approval of the remedial design documents is contingent in part on obtaining EPA's final approval of the Work Plan and the characterization of the unsaturated and saturated zone soil contamination." The text should be revised to more clearly reflect the nature of EPA's approval.
2. pg. 1-4 & 1-5 It should be noted that the definition of "clean" and "contaminated" soils should not only be based on TCE levels. The Order lists fifteen chemicals of concern and though TCE was chosen as an "indicator parameter" for soil cleanup, the Explanation of Significant Difference clearly states that "all chemicals must be remediated so that their respective concentrations are at or below applicable or relevant and appropriate requirements and do not exceed maximum cumulative risk levels." TCE was only one of the constituents of chemical mixtures utilized in operations at 501 Ellis Street. The revised text should address the other chemicals of concern detected from sampling on site, such as 1,2,4 trichlorobenzene, freon 113, phenol and tetrachloroethene and evaluate whether remediating for TCE has effectively remediated other chemicals to below clean up standards.
3. pg. 2-1, section 2.1 a) The grid spacing is rectangular in shape, therefore the terminology "triangular grid spacing" should be corrected. b) locations of some of the exploratory borings have been changed from those proposed in the RDD. A discussion of the basis for these changes should be included in the text.
4. pg. 2-7, section 2.5.4 The SRR states that QA/QC procedures were generally in accordance with those described in the QAPP. The text should report whether corrective actions were taken in accordance with the QAPP or discuss any deviations from the QAPP and the actions taken.
5. pg. 3-12, section 3.6.4.1 The utilization of exploratory borings to determine the extent of contamination is very different from excavation wall sampling. Changes in proposed protocol should be approved by the EPA project manager before implementation. As discussed in the general comments, in several areas the extent of the excavation did not reach the "clean" exploratory borings, therefore there is no verification that the extent of the excavation was sufficient. In addition boring R-9 and R-35 on the edge of excavations in Area 1 showed TCE contamination at various depths. No boring is present adjacent to this area to confirm that the extent of the excavation is sufficient.

6. pg. 3-13, section 3.6.4.2 Use of an HNU to determine the extent of soil contamination is not appropriate unless confirmed with analytical data. Gathering data from the "breathing space" at the top of the auger-hole allows for dilution. Verification that the extent of the excavation was sufficient should have been from the analysis of soil samples. The extent of contamination should be confirmed through laboratory analysis of confirmatory soil samples in areas where the excavation did not extend to the exploratory borings or in areas where exploratory borings detected TCE or other chemicals of concern.

The Revised Soil Remediation Report will be due to EPA by May 31, 1995. If you have any questions or concerns regarding these comments, please call me at (415) 744-2235.

Sincerely,



Elizabeth J. Adams
EPA MEW Project Manager

cc: Janet Argyres, Bechtel Environmental, Inc.
A. Eric Madera, Raytheon (CD Parties)
Vincent T. Jones, Schlumberger (Order Parties)
Sandra Olliges, NASA Ames
Stephen Chao, Navy
Alana Lee, B&V Waste Science

Acknowledgement of Receipt:

Michael Kierig

Date: _____